IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A method for predicting a precipitation behavior of oxygen in a silicon single crystal for predicting the behavior of oxygen precipitates produced in the silicon single crystal in response to heat treatment, comprising:

performing a calculation by using as parameters an initial oxygen concentration in the silicon single crystal, a concentration of thermal donors generated according to a thermal history from 400°C to 550°C which the silicon single crystal undergoes during crystal growth, and a heat treatment condition to which the silicon single crystal is subjected; and

determining a density of the oxygen precipitates produced in the silicon single crystal and an amount of precipitation in a case where the silicon single crystal is subjected to heat treatment.

2. (Original) A method for predicting a precipitation behavior of oxygen in a silicon single crystal for predicting the behavior of oxygen precipitates produced in the silicon single crystal in response to heat treatment, comprising:

performing a calculation by using as parameters an initial oxygen concentration in the silicon single crystal and a concentration of thermal donors generated according to a thermal history from 400°C to 550°C which the silicon single crystal undergoes during crystal growth;

determining a nucleation rate of the oxygen precipitates produced in the silicon single crystal during a heat treatment process in a case where the silicon single crystal is subjected to heat treatment; and

determining a density of the oxygen precipitates and an amount of precipitation by using the nucleation rate determined.

3. (Currently Amended) A method for determining a production parameter of a silicon single crystal in which, in order to set a density of oxygen precipitates in the silicon single crystal and an amount of precipitation to desired values, an initial oxygen concentration in the silicon single crystal, a thermal history from 400°C to 550°C which an ingot of the silicon single crystal undergoes during crystal growth, and a heat treatment condition to which the silicon single crystal is subjected are determined by making use of the method for predicting the precipitation behavior of oxygen in the silicon single crystal according to claim 1. ~~or 2~~.

4. (Original) A storage medium for storing a program for predicting by a computer a behavior of oxygen precipitates produced in a silicon single crystal in response to heat treatment, wherein the storage medium stores the following processing as the program:

processing in which a calculation is performed by using as parameters an initial oxygen concentration in the silicon single crystal, a concentration of thermal donors generated according to a thermal history from 400°C to 550°C which the silicon single crystal undergoes during crystal growth, and a heat treatment condition to which the silicon single crystal is subjected; and

processing in which a density of the oxygen precipitates produced in the silicon single crystal and an amount of precipitation are determined in a case where the silicon single crystal is subjected to heat treatment.

5. (Original) A storage medium for storing a program for predicting by a computer a behavior of oxygen precipitates produced in a silicon single crystal in response to heat treatment, wherein the storage medium stores the following processing as the program:

processing in which a calculation is performed by using as parameters an initial oxygen concentration in the silicon single crystal and a concentration of thermal donors generated according to a thermal history from 400°C to 550°C which the silicon single crystal undergoes during crystal growth;

processing in which a nucleation rate of the oxygen precipitates produced in the silicon single crystal during a heat treatment process is determined in a case where the silicon single crystal is subjected to the heat treatment; and

processing in which a density of the oxygen precipitates and an amount of precipitation are determined by using the determined nucleation rate.